

## Claims

- [c1] What is claimed is:
- 1.A display apparatus comprising:
- an upper frame;
- a display panel installed inside the upper frame for displaying images;
- an array of light tubes disposed behind the display panel for generating light;
- a reflecting plate disposed behind the array of light tubes for reflecting light generated by the array of light tubes, the reflecting plate having a main portion and at least one side portion being tilted with respect to the main portion;
- a supporting frame installed on the reflecting plate for supporting the display panel, the supporting frame comprising a plurality of sub-frames, at least one of the sub-frames being tilted with respect to the main portion of the reflecting plate and being separated from the side portion by a gap; and
- a circuit board installed within the gap for controlling operations of the display apparatus.
- [c2] 2.The display apparatus of claim 1 wherein the display panel is a liquid crystal display panel.
- [c3] 3.The display apparatus of claim 1 further comprising a stand assembly having one end coupled to the reflecting plate.
- [c4] 4.The display apparatus of claim 1 further comprising a stand assembly having one end coupled to the upper frame.
- [c5] 5.The display apparatus of claim 1 further comprising a diffuser interposed between the display panel and the array of light tubes for diffusing light generated by the array of light tubes.
- [c6] 6.The display apparatus of claim 1 further comprising an EMI (electromagnetic interference) shield covering the circuit board for shielding radiation.
- [c7] 7.The display apparatus of claim 1 wherein the circuit board comprises an X-board for driving the display panel, a control board for controlling the X-board, and an A/D converter for converting analog signals into digital signals.



- [c15] 15.A display apparatus comprising:  
an upper frame;  
a display panel installed inside the upper frame for displaying images;  
an array of light tubes disposed behind the display panel for generating light;  
a reflecting plate disposed behind the array of light tubes for reflecting light generated by the array of light tubes, the reflecting plate having a main portion and at least one side portion being tilted with respect to the main portion;  
a supporting frame installed on the reflecting plate for supporting the display panel; and  
a circuit board installed on the side portion of the reflecting plate for controlling operations of the display apparatus.
- [c16] 16.The display apparatus of claim 15 wherein the display panel is a liquid crystal display panel.
- [c17] 17.The display apparatus of claim 15 further comprising a stand assembly having one end coupled to the reflecting plate.
- [c18] 18.The display apparatus of claim 15 further comprising a stand assembly having one end coupled to the upper frame.
- [c19] 19.The display apparatus of claim 15 further comprising a diffuser interposed between the display panel and the array of light tubes for diffusing light generated by the array of light tubes.
- [c20] 20.The display apparatus of claim 15 further comprising an EMI (electromagnetic interference) shield covering the circuit board for shielding radiation.
- [c21] 21.The display apparatus of claim 15 wherein the circuit board comprises an X-board for driving the display panel, a control board for controlling the X-board, and an A/D converter for converting analog signals into digital signals.
- [c22] 22. A display apparatus comprising:  
a upper frame;  
a display panel installed inside the upper frame for displaying images;

an array of light tubes disposed behind the display panel for generating light;  
a reflecting sheet disposed behind the array of light tubes for reflecting light generated by the array of light tubes;  
a supporting plate having a main portion and at least one side portion being tilted with respect to the main portion, the main portion used for supporting the reflecting sheet;  
a supporting frame installed on the main portion of the supporting plate for supporting the display panel; and  
a circuit board installed on the side portion of the supporting plate for controlling operations of the display apparatus.

- [c23] 23.The display apparatus of claim 22 wherein the display panel is a liquid crystal display panel.
- [c24] 24.The display apparatus of claim 22 further comprising a stand assembly having one end coupled to the supporting plate.
- [c25] 25.The display apparatus of claim 22 further comprising a stand assembly having one end coupled to the upper frame.
- [c26] 26.The display apparatus of claim 22 further comprising a diffuser interposed between the display panel and the array of light tubes for diffusing light generated by the array of light tubes.
- [c27] 27.The display apparatus of claim 21 further comprising an EMI (electromagnetic interference) shield covering the circuit board for shielding radiation emitted by the circuit board.
- [c28] 28.The display apparatus of claim 22 wherein the circuit board comprises an X-board for driving the display panel, a control board for controlling the X-board, and an A/D converter for converting analog signals into digital signals.
- [c29] 29.A display apparatus comprising:  
an upper frame;  
a display panel installed inside the upper frame for displaying images;  
an array of light tubes disposed behind the display panel for generating light;

an integrated supporting unit disposed behind the array of light tubes having a main portion and at least one side portion being tilted with respect to the main portion for reflecting light generated by the array of light tubes and supporting the display panel; and  
a circuit board installed on at least one of the side portions of the reflecting plate for controlling operations of the display apparatus.

- [c30] 30.The display apparatus of claim 29 wherein the display panel is a liquid crystal display panel.
- [c31] 31.The display apparatus of claim 29 further comprising a stand assembly having one end coupled to the integrated supporting unit.
- [c32] 32.The display apparatus of claim 29 further comprising a stand assembly having one end coupled to the upper frame.
- [c33] 33.The display apparatus of claim 29 further comprising a diffuser interposed between the display panel and the array of light tubes for diffusing light generated by the array of light tubes.
- [c34] 34.The display apparatus of claim 29 further comprising an EMI (electromagnetic interference) shield covering the circuit board for shielding radiation.
- [c35] 35.The display apparatus of claim 29 wherein the circuit board comprises an X-board for driving the display panel, a control board for controlling the X-board, and an A/D converter for converting analog signals into digital signals.
- [c36] 36. A display apparatus comprising:  
an upper frame;  
a display panel installed inside the upper frame for displaying images;  
an array of light tubes disposed behind the display panel for generating light;  
a reflecting sheet disposed behind the array of light tubes for reflecting light generated by the array of light tubes;  
an integrated supporting unit comprising a main portion and at least one side portion being tilted with respect to the main portion for supporting the

reflecting sheet and the display panel; and  
a circuit board installed on at least one of the side portions of the supporting plate for controlling operations of the display apparatus.

- [c37] 37. The display apparatus of claim 36 wherein the display panel is a liquid crystal display panel.
- [c38] 38. The display apparatus of claim 36 further comprising a stand assembly having one end coupled to the integrated supporting unit.
- [c39] 39. The display apparatus of claim 36 further comprising a stand assembly having one end coupled to the upper frame.
- [c40] 40. The display apparatus of claim 36 further comprising a diffuser interposed between the display panel and the array of light tubes for diffusing light generated by the array of light tubes.
- [c41] 41. The display apparatus of claim 36 further comprising an EMI (electromagnetic interference) shield covering the circuit board for shielding radiation emitted by the circuit board.
- [c42] 42. The display apparatus of claim 36 wherein the circuit board comprises an X-board for driving the display panel, a control board for controlling the X-board, and an A/D converter for converting analog signals into digital signals.